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SUMMARY OF

UNITED KINGDOM: PROJECTED LEVEL OF DEMAND, SUPPLY, AND IMPORTS OF AGRICULTURAL PRODUCTS, 1970, 1975, and 1980

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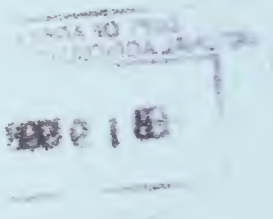

PREFACE

This report summarizes the major findings of a comprehensive study, United Kingdom: Projected Level of Demand, Supply, and Imports of Agricultural Products, 1970, 1975, and 1980. This study was conducted under contract for the Economic Research Service and the Foreign Agricultural Service, U.S. Department of Agriculture, and will be published in late 1969. The contract was administered under the supervision of James J. Naive, a member of the Europe and Soviet Union Branch, Economic Research Service. This research was undertaken to update an earlier study contracted by USDA. The results of that study were reported in United Kingdom: Projected Level of Demand, Supply, and Imports of Farm Products in 1965 and 1975 (ERS-Foreign 19) and analyzed for U.S. trade implications in Summary and Evaluation of United Kingdom: Projected Level of Demand, Supply, and Imports of Farm Products in 1965 and 1975 (ERS-Foreign 50).

Most of the research on which this report is based was conducted at the Institute for Research in Agricultural Economics of Oxford University, Oxford, England. The Director of the Institute is Colin Clark, and the research was conducted by George T. Jones. Linden Briscoe prepared the analysis of hides, skins, and textile fibers. The results and views expressed are those of the researchers and do not necessarily reflect those of the U.S. Department of Agriculture. The Europe and Soviet Union Branch, Economic Research Service, is responsible for any oversimplifications or misrepresentations of the results of the basic study. The study was conducted before the November 1967 devaluation of the pound sterling. Before devaluation, the exchange rate was $2.80 per pound sterling.

This is one of a series of USDA-contracted studies analyzing the long-term prospects for agricultural supply and demand in foreign countries. Other completed studies, in addition to the earlier study of the United Kingdom, include reports on Jamaica, Trinidad and Tobago, Leeward Islands, Windward Islands, Barbados, and British Guiana; Venezuela; Mexico; Brazil; Nigeria; Israel; Ghana; Saudi Arabia; Turkey; Republic of South Africa; India; the Philippines; Japan; Malaysia; Pakistan; Hong Kong; Austria;

Italy; France; Netherlands; and West Germany. Copies of these reports are available from the Division of Information, Office of Management Services, U.S. Department of Agriculture, Washington, D.C. 20250.

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SUMMARY

Because projected levels of net farm imports are quite dependent on assumptions made about future agricultural and trade policies, projections for 1975 are based on three assumptions. They are: Continuation of present policies; a change to "tariff support" policies; and entry into the EEC.

Regardless of the policy assumption made, increased imports are in prospect for some important items--lard, other fats and oils (except vegetable), oilcake, fish and meat meal, pulses and nuts, fruits and vegetables, and tobacco. Declines are projected for wheat, feedgrains, and beef.

Under existing policies, increases in U.K. net imports are indicated for 1970, 1975, and 1980 for pork, lamb, milk and milk products, fats and oils (except vegetable), oilcake, protein meal, sugar, pulses and nuts, fruits and vegetables, and tobacco. Declines are projected for beef, vegetable oils, and oilseeds. The base period used was 1959-63.

With "tariff support" policies, imports for 1975 would generally be lower than under present policies. Exceptions include substantially larger imports of lard, other fats and oils, and oilcake, and slightly larger imports of vegetable oils (although still below the base-period level); sugar; pulses, nuts, and oilseeds; potatoes; other fresh and frozen vegetables; citrus; and other fruits.

Assuming EEC entry for the United Kingdom, production, consumption, and trade projections change significantly, and 1975's overall import requirements are further reduced from levels projected under present policies. Increases are seen for imports of lamb, bacon and canned ham, other canned meat, vegetable oils, other fats and oils (excluding butter and lard), oilseeds, dried fruit, tomatoes, potatoes, and other fresh and frozen vegetables. But some of the most important import items decline below levels projected under either of the other alternatives. These items are beef, milk and milk products, lard, sugar, wheat, feedgrains, citrus, and other fruit.

Projected net imports of some of the most important commodities shipped by the United States are given below for each policy alternative (1,000 tons):

	1959-63	Present policies 1970	1975	1980	Tariff support 1975	EEC entry 1975
Meat 1/	1,261	1,281	1,334	1,370	1,223	1,247
Fats and oils 2/ .	738	775	782	786	810	897
Oilseeds	996	923	907	892	907	961
Oilseed cake and meal	1,161	1,345	1,420	1,486	1,543	1,528
Grain (equiv.) ...	8,941	8,283	7,940	7,758	7,583	5,396
Wheat	4,542	4,180	4,115	4,093	4,068	2,948
Dried fruit	150	158	162	167	162	164
Other fruit (equiv.)	1,700	2,027	2,191	2,343	2,209	2,133
Vegetables 3/	357	437	474	520	480	564

1/ Excludes some minor classes of imported meat.
2/ Excludes butter.
3/ Excludes potatoes, tomatoes, and pulses.

The value index of projected net imports in 1970, 1975, and 1980 (at base-period prices) is 102.8, 105.6, and 108.5, respectively, under existing policies. Under tariff support policies, the value index of net imports (base-period prices) increases to only 104.0 for 1975. With EEC membership, it drops to 100.6.

Projections for cotton, wool, and hides and skins were made independently from the above analysis. Net imports of wool and of cattle hides and calfskins are projected to decline sharply under the impact of rising domestic production and declining consumption. With EEC entry, they would be larger in 1975 than under present policies, but still below base-period levels. Cotton use and imports are projected to decline less drastically, with no difference between 1975 imports under present policies and those under EEC entry.

SUMMARY OF UNITED KINGDOM: PROJECTED LEVEL OF DEMAND, SUPPLY, AND IMPORTS OF AGRICULTURAL PRODUCTS, 1970, 1975, AND 1980

By

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INTRODUCTION

The United Kingdom is the world's largest importer of agricultural products; the United States is the largest exporter. In 1966/67, the United Kingdom was the fifth largest dollar market for U.S. agricultural exports, with shipments valued at $454 million. U.S. farm exports to the United Kingdom exceeded imports from it by $425 million--making a significant contribution to the U.S. favorable balance of trade. Major U.S. exports were unmanufactured tobacco ($151 million), feedgrains ($92 million), wheat and flour ($41 million), fruits and preparations ($23 million), and vegetables and preparations ($22 million).

Given these facts, the value of projections of the most probable developments in U.K. agricultural production, consumption, and net trade is obvious. This report summarizes such developments projected in a major study on the United Kingdom's supply, demand, and net agricultural imports for 1970, 1975, and 1980.

Because estimates tend to vary depending on assumptions about future policies, alternate sets of projections were made. Likely supply and demand developments were considered not only under present government policies, but also under a change to "tariff support" policies and under Common Market entry--a possibility within the timespan of the projections and one causing especially high interest in the United Kingdom as a future market for U.S. farm products. U.K. acceptance of the Common Agricultural Policy and of EEC trade policies would significantly affect future U.K. production and trade patterns. The two sets of projections based on alternative policies are for 1975 only.

METHODOLOGY FOR PROJECTIONS

The projections in this report are based on the 4-year period 1959-63. Preliminary projections of demand, domestic production, and imports (at constant prices) were first prepared independently. The discrepancies between these separate preliminary estimates were then reconciled through changing the wholesale prices assumed, which, in turn, changed the projected quantities. This method assigns priority to neither supply nor demand, nor to source of supply, and avoids much reiteration. The list of products considered simultaneously was limited to 39, with some similar but imperfectly substitutable items (for example, domestic and imported lamb) considered separately. Final projections for 1975 were made for three different policy assumptions. The first set of projections is based on the assumption that the policies of the last decade will be continued, but that deficiency payments on most commodities will be reduced.

The second set of projections (for 1975 only) is based on the assumption that deficiency payments will be replaced with support by tariffs, according to a proposal advanced by the Conservative Party. It was necessary to arbitrarily resolve certain unclear details of the proposal as a basis for the projections. A tariff of 20 percent on grains is assumed.

The third set (also for 1975 alone) is based on EEC entry for the United Kingdom--along with Denmark, Ireland, and Norway--with certain possible modifications of the Common Agricultural Policy. The modifications which are considered possible following successful negotiations are reductions in the levies on wheat (50 percent), feedgrains (30 percent), and milk and milk products (40 percent).

The projections reported here indicate the most probable developments in agricultural production, consumption, and net trade of the United Kingdom. For each set of projections, trends indicated may be more important than the exact numbers projected.

Also, these projections must be considered as averages centered on 1970, 1975, and 1980, assuming normal growing conditions.

POPULATION AND LABOR FORCE

The population is expected to grow by 7, 12, and 16 percent from 1961 to 1970, 1975, and 1980, respectively (table 1). 1/ The general index of consumer units (weighting different components of the population according to their level of consumption) is expected to rise only 6, 10, and 14 percent, respectively. This smaller rise is caused by an increase in the proportion of older people and children in the population. The index of consumer units for meat and many other food products is expected to rise at still lower rates--6, 9, and 14 percent, respectively, for the 3 target years.

The labor force, measured in man-years, is expected to grow by 5, 6, and 9 percent, respectively, from 1961. Measured in man-hours, it is expected to change by +2, -1, and -5 percent. Labor productivity is expected to rise at 2.5 percent, compounded annually.

THE NATIONAL ECONOMY

Both gross domestic product (GDP) and consumers' expenditures are projected to rise by 28, 44, and 59 percent between 1961 and 1970, 1975, and 1980, respectively (table 2). Higher income projections than these have been prepared, based largely on outdated official and para-official estimates which assume a higher rate of productivity growth of about 3.5 percent annually. The above growth rates--which also are based on neutral assumptions of gross investment (continuing at 18.4 percent of GDP), trade, and taxation--are considered more probable, especially over the more immediate future. These projections imply an increase in consumers' expenditures per consumer unit of 2.07 percent from 1961 to 1970, 1.65 percent from 1970 to 1975, and 1.35 percent from 1975 to 1980.

DEMAND FOR FOOD AND SELECTED AGRICULTURAL PRODUCTS

Food consumption (measured at retail level) grew by 7 percent per capita from 1955-57 to 1965 but has tended to stagnate in recent years. During the same period, total expenditures (at constant prices) rose 20 percent and real

1/ Tables are grouped at the end of the report, starting on p. 25.

food prices fell 6 percent. Measured at farm-import level, the increase in the volume of food consumed appears much greater--especially at the beginning of the period. The increase at retail level is broadly consistent in aggregate, if not in detail, with income elasticities for food that have been derived from budget data. 2/

In the projections, the volume of food consumed, measured at farm-import level, rises by 11, 17, and 24 percent from 1959-63 to 1970, 1975, and 1980 at substantially higher prices (table 3). These price rises are expected solely because of higher real costs of distribution, since real prices of food at wholesale are expected to be slightly lower.

The increase in consumption through 1975 would be reduced to 16 percent by a switch to tariff support and to 14 percent by entry into the EEC. The EEC alternative appears to increase retail food prices by a further 10 percent and wholesale prices by 16 percent. No substantial volume difference is expected between measurements at retail and wholesale.

By 1975, under present policies, the consumption of meat and milk is expected to rise by 20 percent, eggs by 24 (at lower prices), fish by 13 (at higher prices), fats (except butter) by 8, pulses and nuts by 7, potatoes by 6, and sugar by 10 percent. Vegetable consumption is projected to grow by 15 percent and fruit consumption by 21 percent, both at substantially higher prices.

For meats, the main feature of the last decade was the displacement in consumption of meat from grass-fed livestock by meat produced primarily from grain. The rise in poultry consumption--ascribed to a high income elasticity, falling prices, and more retail outlets--is the most striking example. Consumption of beef and lamb decreased while that of poultry and pork increased. Another facet of the last decade which bears on the projections is the expansion of the domestic canning and processing industry. The next decade is not likely to be this favorable for processed meat. The demand for meat will be checked slightly by the rising proportion of children and older

2/ The income elasticity of a commodity is the percentage change in quantity consumed that is associated with a 1-percent change in income.

people in the population, but growth is still projected at 14, 22, and 30 percent for 1970, 1975, and 1980.

A modest income elasticity (0.33) was assumed for beef and veal. This is expected to decline as consumption reaches higher levels. An adverse trend in consumption of beef, as such, is offset by increased use of beef in processed meats. Consumption (at constant prices) is projected to grow by 12, 19, and 26 percent to 1970, 1975, and 1980.

Mutton and lamb consumption declined by 12 percent from 1955-57 to 1965. A natural explanation of this trend seems to be the sharp rise in prices relative to poultry price. The negative trend in consumption caused by the encroachment of poultry is assumed to be less than 0.5 percent annually for the purpose of projection. The income effect is estimated at 0.45 (declining).

National Food Survey data show a fivefold increase in per capita consumption of poultry in households from 1955-57 to 1965. 3/ It seems reasonable to expect substantial further increases. Adjusting for expected price changes, increases of 2.5 percent per annum seem fairly conservative.

In the base period, pork consumption was still below beef consumption, but by 1965 it had overtaken beef. Bacon consumption has stagnated, but fresh pork consumption has increased substantially. In the long run, it seems reasonable to expect the two to be nearly equal.

Consumption of fish, a meat substitute, appears to have been retarded by prices which have risen faster than for other foods or for goods in general. Nevertheless, an estimated income effect of 0.37 (which may be on the high side) would result in consumption increases of 14, 22, and 30 percent, respectively, for 1970, 1975, and 1980.

The rise in egg consumption has been meager, considering the substantial fall in prices. The income elasticity for household use seems to have fallen over the last decade. The base-period income effect seems to have been about 0.3. Consumption is projected to rise slightly with further price declines.

3/ National Food Survey Committee, "Domestic Food Consumption and Expenditure," Ministry of Agriculture, Fisheries, and Food, Her Majesty's Stationery Office, London, various issues.

Separate estimates prepared for domestic and imported milk resulted in consumption increases of 16, 24, and 32 percent for domestic milk, and of 10, 16, and 23 percent for imported milk to 1970, 1975, and 1980, respectively. Liquid milk consumption per capita was almost static from 1955-57 to 1965, butter consumption rose under the influence of falling prices, cheese consumption grew steadily, and consumption of other milk products increased substantially. The income effect for liquid milk in all uses is placed at 0.29 in the base period, although this may be high.

The income elasticity for butter declined from 1955-57 to 1965, but per capita consumption increased due to the effect of falling prices and a negative price elasticity. The income effect is placed at 0.37 in the base period, falling to 0.27 in 1980.

The income elasticity for cheese, unlike butter, did not decline, despite rising consumption. The income effect is placed at 0.38 in the base period and is not expected to fall by 1980. The income elasticity for other milk products appears to be relatively high, and an income effect of 0.78 was estimated for the base period.

Per capita consumption of all fats and oils by households was fairly steady during 1955-57 to 1965 but has tended to decline recently. Margarine consumption has dropped--sharply in recent years--as butter consumption has risen. Lard consumption has gained at the expense of compound cooking fats, as lard prices have declined. Any increases in total fat and oil consumption appear to have occurred in commercial and industrial use. Nonfood use of tallow appears to have risen--displacing vegetable oils--despite a decline in soap production, the major use. Some further increase in nonfood use is likely. Use of marine oils has also increased. Fractions of the fat supply coming from various sources appear generally sensitive to price changes and are possibly becoming more so. Regardless of the supposed income effect, the undercurrent of consumer dislike for fat will likely prevent any rise in consumption per consumer unit. Industrial use of vegetable oils is expected to decline sharply, giving way to animal and marine fats. A slight increase in total fat consumption is projected through 1980.

Sugar consumption in the United Kingdom has long been high. The period 1955-57 to 1965 provides some evidence of consumption reaching a peak; perhaps it is embarking on a downturn. About half the sugar is consumed directly. A

slightly negative and probably declining income effect (-0.05) for this portion of consumption and some other minor segments is more than offset by positive income effects for some important products containing sugar (such as bakery products, preserved fruits, and soft drinks), giving an overall income effect of 0.085. Sugar subsitutes present some real threat to sugar. The threat appears greatest in the manufacture of soft drinks, where the sugar volume is replaced largely by water, not in solid products, where solid replacements may be equally costly. Glucose is a better established substitute than artificial sweeteners. Consumption of glucose is rising steadily and, surprisingly, 1965 consumption exceeded the projected 1970 figure. The income effect for glucose is placed at 0.27, with 1965 data indicating an upward trend. There is very little evidence of a glucose price response relative to sugar prices; glucose seems to be used because of its suitability for specific uses. Despite the threat posed by substitutes, a small rise in sugar consumption is projected based on an expected drop in wholesale sugar prices. Total utilization of raw sugar exceeds U.K. consumption for food; the excess is mainly re-exports of sugar after refining and exports of products containing sugar.

Per capita wheat flour consumption by households fell about 17 percent from 1955-57 to 1965. Bread consumption fell rapidly, as prices appear to have increased much faster than other food prices. Nondomestic uses of flour appear to have expanded. The income effect for flour is estimated at -0.20, with a slight downward trend expected. Increased marketing costs are also expected to exert downward pressure on flour consumption. Use of corn for food and industry rose to 1.032 million tons in 1965. 4/ For the purpose of the projections, this is considered a temporarily high level caused mainly by the large production of alcoholic spirits. Some other uses have also been projected below trend. Per capita food and industrial uses of barley, excluding exports of barley and products, changed very little during 1955-57 to 1965, despite a rise in production of beer and spirits--its major uses. The chief reason for a small decline in barley use is probably displacement by corn and other grains. However, future utilization is expected to increase as production of beer and spirits continues to increase.

4/ Long tons are used in this report except in the section on textile fibers and hides and skins. 1 long ton = 2,240 lbs.

During 1955-57 to 1965, new forms of processing affected vegetable consumption but had relatively little impact on fruit consumption. Fruit and vegetable prices rose considerably more slowly than food prices in general. Prices of processed fruits and vegetables were relatively stable, although there were considerable declines in the prices of certain products. Even for products whose real prices declined substantially, consumption rose less than might have been expected. Household consumption of dried fruit fell drastically over the last decade. For the projections, no income effect is assumed for dried fruit.

A technical development which has had a negative effect on fruit consumption in the last few years is declining use of citrus in soft drinks. This development and the drastic change in the price of orange juice sold in welfare clinics were almost certainly responsible for the drop in the consumption of "natural strength" fruit juices. The overall income effect for citrus juices is placed at 0.8. It is estimated at 0.7 for household consumption, which allows for a negative trend to be offset by an expected rise in consumption of concentrated soft drinks. Consumption of oranges has expanded only slowly. The income effects for fresh citrus, as a whole, and for canned citrus are placed at 0.63 and 1.0, respectively.

Consumption of apples and pears has expanded slightly in recent years (although per capita consumption of pears dropped sharply in 1965), and the income effects are placed at 0.74 and 1.0, respectively. Stone fruit consumption has dropped recently, while consumption of soft fruit, bananas, and other fresh fruit has expanded. Their respective income effects are estimated at 0.70, 1.0 (declining), 0.5 (declining), and 1.0. Consumption of preserved fruits is expected to continue increasing, with income effects estimated at 0.6 for canned peaches, pears, and pineapple and at 1.0 for other canned fruit. Consumption of fruit juices (excluding orange) has increased sharply, and an income effect of 1.3 is assigned to this item. Thus, total fruit consumption (fresh equivalent) is projected to increase substantially.

Among the vegetables, potato consumption was remarkably steady during 1955-57 to 1965, as consumption of French fries, potato chips, and other potato products offset a decline in direct consumption. A decline in real prices has also been beneficial. Income effects for old and new potatoes, placed at -0.1 and 0.35, respectively, allow for expanded total future consumption. The decline in tomato consumption is only partly explained by rising prices. An

average income effect of 0.4 for fresh and canned tomatoes and puree is assigned for projection purposes. Consumption of greens has not risen at all; they are probably being displaced by quick-frozen vegetables. Nevertheless, an income effect of 0.25 (declining) is estimated. Declines in consumption of roots and onions, and salad greens are most readily explained by price rises. Income effects of 0.3 and 1.0 are used in the projections. Legume consumption has been stable in recent years, as the decline in canned legumes has tended to be offset by a rise in quick-frozen consumption. The latter tendency is expected to continue, as an estimated average income effect of 0.93 helps to carry consumption to substantially higher levels.

There is some evidence of a check in the downward trend of pulse consumption. An estimated income effect of -0.15 offsets the increase due to population growth in the projections, and consumption is projected to be about constant.

The remarkable growth in consumption of nuts and oilseeds through 1965 was influenced significantly by increased use of soya flour in various products. An income effect of 0.5 is estimated for these items, resulting in a further substantial projected consumption increase.

Total vegetable consumption, estimated to have increased by 6 percent in the base period, is assigned an income effect of 0.6, with an expected tendency to decline. This income effect will allow for substantial growth in demand. However, canned vegetable consumption (income effect, 0.10) is expected to increase slowly as consumption of quick-frozen and freeze-dried products expands greatly.

Alternative policy assumptions affect some of the forecasts of food demand, particularly for dairy products in the event of EEC membership (table 3). Meat, egg, and sugar consumption would also be reduced with EEC entry, but compensating increases would occur for fats, fish, cereals, pulses, potatoes, and vegetables. Some shifting might also occur in consumption of specific commodities within these groups. For example, higher butter prices within the EEC would encourage substitution of other fats. However, lard would be subject to higher and more unpredictable levies than vegetable oils, and it is unlikely that lard consumption could gain relative to compound fats, or that its use in margarine or compound fats would be as high.

Despite some projected improvements in the efficiency of converting livestock feed to livestock products, demand

for feed concentrates is projected to increase somewhat (table 4). In the base period, 15.4 million tons of concentrates were consumed, including about 13 million tons of grain and other low-protein feeds. Under present policies, concentrate consumption by livestock is projected to rise to 19.1, 20.2, and 21.3 million tons by 1970, 1975, and 1980. Projected consumption for 1975 is 19.6 million tons under tariff support policies and 18.7 million tons under EEC entry. For grain alone, requirements are projected to reach 14.0, 14.9, and 15.8 million tons under current policies by 1970, 1975, and 1980; under tariff support policies, grain requirements in 1975 would reach 14.2 million tons and under EEC entry only 13.3 million tons. These projections are derived from the analysis of livestock production and of grass and forage output referred to in following sections. The increased requirement is about equally proportioned between cattle, poultry, and hogs, with only minor increases for sheep and horses. Under tariff support policies, the most notable change is a smaller increase in the concentrate requirement for hogs. Under EEC entry, the increase in the requirement for hogs is smaller, and there is a noticeably smaller increase in the requirement for cattle. Overall feed requirements are less under both alternatives than under present policies.

Among the grains, corn is expected to gain relative to sorghum and other grains as corn is not as easily replaced by barley in poultry feed. Consumption of high-protein concentrates is also projected to increase substantially. Consumption of animal protein concentrates--already high relative to U.S. consumption--is expected to increase more rapidly on a percentage basis, although oilseed cake and meal are projected to gain more on a quantitive basis. Price rises have retarded growth in oilseed cake and meal consumption, especially in recent years. Consumption of high-protein concentrates is not expected to grow as fast relative to grain consumption as in recent years. Either a tariff support policy or EEC entry would increase total consumption of high-protein concentrates (especially oilseed cake and meal) since their relative price changes will not be unfavorable. Consumption of protein of animal origin would be slightly lower than projected under present policies.

Consumption of tobacco rose steadily until 1960, but has since declined. The substantial income effect (approximately 0.6) appears to have been offset largely by price increases and adverse publicity in the tobacco-health issue. The projections--based on the assumption that the income effect will continue to be offset--are 272 million

pounds in 1970, 280 million in 1975, and 290 million in 1980, compared with 257 million in 1959-63.

CROP PRODUCTION

During the last decade, agricultural productivity increased at an unusually rapid rate--as measured in both yield increases and increased labor productivity. From 1955-57 to 1964-66, net output per man rose 69 percent, and output of crops and grass per acre rose by 37 percent. 5/

The projections suggest some check in the overall rate of increase in net output and even in the rate of outflow of labor from agriculture, which was so rapid in the early 1960's. Nevertheless, the productivity of labor should double by 1975.

The average yield of grain increased by 6.7 cwt. per acre from 1955-57 to 1964-66--nearly 30 percent in 9 years. 6/ This is mainly due to increases in yields of wheat, barley, and oats, in that order, but is partly due to shifts of area, especially from wheat to barley. The yield increases have permitted farmers to maintain real income per acre despite lower grain prices. For wheat, barley, and oats, yield increases of 6.6, 5.2, and 4.0 cwt., respectively, were recorded during 1955-57 to 1964-66. Implicit in the projections is the belief that such a high rate of increase will not be sustained. From 1959-63 to 1970, projected yield increases (in cwt. per acre) are wheat, 4.4; barley, 3.6; and oats, 1.8.

Absolute differences in profit per acre have largely caused the virtual disappearance of oats and mixed grain from production. Other reasons are reduced use of straw for feed, the difficulty of harvesting oats by combine, and the difficulty of controlling weeds in mixed grains containing pulses. Wheat acreage was relatively static over the last decade, as adverse price movements and other factors helped offset yield increases. Over the base period, profits per acre were greater for barley than for wheat because of wheat's higher production costs. Grain yields are projected to gain 1.5 percent annually up to 1970 and 1 percent from then until 1980. The area pro-

5/ In this section, data are for crop years (e.g., 1955-57 to 1964-66 = 1955/56-1957/58 to 1964/65-1966/67).

6/ British cwt. = 112 pounds.

jections for 1970 (table 5) stand only at the 1966 level, with some further shift from oats and even barley to wheat. The reason for a relatively constant projected grain area is the belief that improvements in grassland productivity will encourage livestock production and offset tendencies which would make grain production more profitable relative to production of grass. The resulting total output projection for 1970 (table 6) is substantially below that suggested in the National Plan (which is consistent with a figure of 16 million tons, net of seed). The National Plan total is to be considered only as a technical possibility.

Yields of potatoes and sugarbeets also increased substantially during 1955-57 to 1964-66. Acreage restrictions on these crops may have encouraged higher yields to some extent. The fertilization rate for sugarbeets, which was regarded as near optimum in 1957, has nevertheless increased. The rise in sugarbeet yields, however, is largely due to earlier planting. Early potato yields were relatively steady, while yields of late potatoes increased by about 2 percent annually over the decade. Prices have increased moderately for sugarbeets but have declined sharply for potatoes.

The sugarbeet area is projected to remain constant, while the area of potatoes declines slightly. Higher labor costs are expected to be a major factor in the declining potato area. For sugarbeets, refining capacity and administrative actions are the limiting factors. Per acre production costs of sugarbeets appear to have been rising faster than for potatoes. Significant increases are projected for refined sugar (1.7 percent annually) and late potato yields (1 percent), while early potato yields increase only slightly. Net production of sugar and sugar byproducts and of late potatoes under present policies is projected to expand significantly, while that for early potatoes declines. For 1975, neither a change to tariff support policies nor EEC entry would create a change in sugar output. However, total potato production would be about 1 percent larger under tariff support policies and about 2 percent lower under EEC entry.

Among relatively minor crops, yields of pulses for food (and probably for feed) and root crops (to the extent recorded) have risen, while hops yields have been maintained despite the introduction of mechanical harvesting. Cereal farmers are showing renewed interest in pulses as a "break" crop, but root crops for forage are tending to

disappear--largely because of their high labor costs. 7/ A yield increase of 1.5 percent a year (comparable to the yield increase on grazing land) is projected for root crops, while the yield increase for pulses declines from 1.4 percent between the base period and 1970 to 1.1 percent between 1975 and 1980. The yield of hops is assumed to remain unchanged.

The area in pulse crops is projected to increase substantially; all the increase is in pulses for feed. Projected area of root crops continues to decline sharply, although at a decreasing rate. The hops area is projected to grow in line with beer consumption--at a moderate rate of increase. Acreage through 1975 would not be affected significantly under either of the alternatives to present policies.

The total area of crops and fallow land has risen sharply in recent years, while the area of rough grazing land has probably fallen with increased forestation. Temporary grassland increased for the last decade as a whole, but is now clearly being diverted to grain production. The area of permanent grassland has steadily fallen.

The total area in crops and fallow land is projected to increase through 1980, but the 1970 acreage (12 million) is only slightly exceeded in 1975 and 1980. The 1975 acreage would be 188,000 acres less under tariff support policies than under present policies, but 601,000 acres more in the event of EEC entry. The total grazing area is projected to decline gradually from about 49 million acres in the base period to almost 47.2 million in 1980. The decline is mostly in permanent grassland and rough grassland, as the temporary grassland area is stabilized after 1970. Rough grassland is expected to be lost mainly to forestry, while some is expected to be converted to permanent pasture. The demands from urbanization and forestation will reduce the area of permanent grassland.

Projections of the livestock feed supply from pasture and forage crops were made on the basis of "grazing units," in which temporary and permanent grass, rough grazing, root crops for forage, oat straw, and sugarbeet tops were weighted in terms of their feed-producing capability. These data were compared with demand projections based on livestock numbers, by type. Data on concentrates were also considered

7/ A break crop is one used in a rotation pattern because it benefits successive crops in the rotation.

in the analysis to provide a basis for analyzing the substitution possibilities between grass and concentrates.

The data indicate a sharp gain in the efficiency of grazing land between 1955-57 and 1964-66. The index of efficiency (1959-63 = 100) thus appears to have increased from 83 to 102. During that period, demand for grazing appears to have increased from 15.6 to 17.6 million tons of starch equivalent, with sheep accounting for about 1.2 million tons. However, adjusting for an increase of about 0.8 million tons in the use of cattle feed at standardized requirements, the increase in the index of grazing efficiency increased from 84 percent to 99 percent--2 percent annually. The increased use of fertilizer is probably sufficient to explain the gain in efficiency. In making the projections, a 1.5-percent increase in efficiency is first assumed, the rate of increase in the last decade being considered abnormal because of the heavy demand on the available space. The projections under tariff support or EEC entry are based on a higher rise in productivity achieved through more intensive techniques--which would likely be forced by higher concentrate prices. When the productivity increase demanded is greater than 1.5 percent, both grassland productivity and concentrate use are adjusted upward. Low feed prices work in two ways: They encourage heavier stocking but they discourage grazing relative to feeding concentrates. The amount of grazing required (in million tons of starch equivalent) is projected to rise by 10, 13, and 16 percent under present policies by 1970, 1975, and 1980. The comparable projections for 1975 under tariff support and EEC entry are 13 and 8 percent, respectively, above base-period requirements. When the final adjustments are made, yield increases of 18, 25, and 32 percent are implied for the respective target years under present policies, and about 26 percent for 1975 under both alternative policies.

The area of vegetable crops (excluding pulses for food) did not change during 1955-57 to 1964-66, although vegetable prices rose relative to prices of other crops (but fell absolutely in real terms). The area of orchard fruit continued falling rapidly, despite relatively stable real prices; however, the area of soft fruit remained about the same, as real prices were almost unchanged at the end of the period.

A constant vegetable crop area (except for a slight increase in the area under glass) plus a slight increase in yields produce a small gain in output through 1980. A decreasing bearing acreage of orchard fruit is more than

offset by rising yields to produce a modestly increasing output. The soft fruit area is projected to remain constant, but yield increases of 2 percent annually result in a substantial rise in output.

The volume and value of all horticultural production is estimated to increase from £163 million to £189 million between the base period and 1975. 8/ EEC entry would reduce 1975 output to £183 million (and even that figure may be too optimistic).

LIVESTOCK PRODUCTION

The number of cows increased somewhat during 1955-56 to 1964-65, with practically all the increase occurring in cows raised chiefly for beef. 9/ Real returns (including subsidies) from beef cattle were almost maintained during this period, while the beef ration dropped slightly in price. Milk yields of dairy cattle increased at a rate of about 9 gallons per cow annually. Price changes of milk and concentrated feed were almost parallel; at the end of the period, both were about equal to their money value in 1954-56. Real milk prices dropped dramatically, however. Although the number of milk producers dropped sharply, that drop was offset by a rise in average herd size.

The cattle sector has made many adjustments to increase beef production--especially of young beef. The most obvious adjustment has been increasing the proportion of calves reared for beef. Depending on the method used, the estimated increase varies from 11 to 18 percent for 1955-56 to 1964-66. The most important factor in the increase was higher beef prices, but a rise in the number of Friesian cows and increased cross breeding of dairy cows with beef breeds also facilitated it. A steady decline in the slaughter age of cattle has further helped to increase beef production.

Cow numbers are projected to increase by 0.75 percent annually through 1980, except during 1961-70, when milk cow numbers increase at only 0.50 percent annually (table

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8/ Horticultural production, as used here, excludes pulses, new potatoes, cider apples, perry pears, and horticultural output from holdings of less than 1 acre; includes channel islands production.

9/ In this section, data are for marketing years (e.g., 1955-56 to 1964-65 = 1955/56-1956/57 to 1964/65-1965/66.

7). Both calvings and calves reared are projected to increase by 0.1 percent annually, and the calf slaughter rate is expected to remain 19 percent throughout the projection period. The result is an increase in beef and veal output from 848,000 tons in 1959-63 to 963,000, 993,000, and 1,052,000 tons in 1970, 1975, and 1980 (table 6). Under tariff support policies and EEC entry, 1975 output would be changed to 1,017,000 and 967,000 tons, respectively.

Milk sales are projected to rise 31 percent by 1975 (to 3,033 million gallons); a rise of 19 percent is seen by 1970 and 44 percent by 1980. 10/ These sales increases are influenced by a diversion of resources from grain and by lower feed prices. With tariff support policies (causing higher feed costs), some resources would be diverted to beef production, and milk output would be only 5 percent higher than in 1959-63. Upon EEC entry, resources would be diverted from beef and milk to grain production. Milk production in 1975 would thus be only 2 percent above the base period level.

The number of ewes for breeding rose 25 percent from 1955-57 to 1964-66, despite almost constant money prices. There is some evidence that the rate of increase tapered off during the decade. The estimated long term upward trend of 0.75 percent has been reduced to 0.5 percent for the period through 1970. The lambing rate appears to have increased over the decade--apparently 6 percent or more, depending on the method of estimation. The data suggest that the rate had stagnated near the end of the decade. However, due to possible breeding improvements, an annual increase of 0.5 percent is assumed as a basis for projection. Slaughter weights have been almost constant, so these weights are fixed at current levels.

Production of mutton and lamb is projected to increase by 20 percent by 1975 under present policies or only 16 or 10 percent under tariff support or EEC entry, respectively. The 1970 and 1980 projections under present policies exceed output in 1959-63 by 12 and 28 percent, respectively.

The data suggest that fleece weights have declined recently, while yields of skin wool have remained constant. For the projections, wool yields are assumed constant. The number of sheep over 1 year of age increased by 20 percent

10/ Imperial gallons (1 imp. gal. = 1.201 U.S. gals.).

from 1955-57 to 1964-66. Wool production is projected to increase by 7, 12, and 17 percent from 1959-63 to 1970, 1975, and 1980. Entry into the EEC would result in production of only 2 percent more wool in 1975 than in the base period.

The number of sows for breeding (on agricultural holdings) rose by 29 percent between 1955-57 and 1964-65, but more recent data show a sharp decline. The increase occurred despite the fact that during 1955-57 to 1964-65, farmers' prices for hogs dropped substantially in money terms and in relation to compound feed prices, and slightly in relation to barley meal prices. For projection purposes, an annual increase of 3 percent in sows for breeding is assumed, reflecting improvements in feed conversion and the tendency toward more economic production units. A rise in slaughterings of about one pig per sow seems to have occurred during the decade, although this is difficult to confirm by some of the data. A rise of only 0.2 percent annually is assumed for the projection. Feed conversion seems to have improved by about 1 percent annually, as average output during 1955-57 was 35 percent, and feed inputs were 24 percent larger than during 1964-65. Feeding efficiency is assumed to rise by 0.5 percent annually during the projection period.

Under present policies, pork production is projected to exceed 1959-63 production by 20, 31, and 44 percent by 1970, 1975, and 1980. The hog-feed price ratio is expected to be relatively stable, with prices of both declining. A change to tariff support policies would result in pork production being only 22 percent above 1959-63 by 1975, and EEC entry would result in only a 20-percent increase.

Egg yields increased by about 2 percent annually during 1955-57 to 1964-65. The average annual output of eggs for human consumption increased by about 30 percent over the period. During this expansion, money prices fell substantially, and recently a decline in the egg-feed price ratio was followed by reduced numbers of laying birds. But the long-term upward trend in numbers of laying birds of 2 percent annually is expected to continue throughout the projection period. The less flexible the egg supply, the larger will be their price reduction. Perhaps the estimated elasticity of supply (2.0) is too high for projection purposes. The improvement in egg yields is estimated at 4 eggs annually (as in recent years) up to 1970, and 3 eggs afterward. The reduction in feed required per egg is expected to be half the rise in yields. The resulting yield projections for 1970, 1975, and 1980 under present policies

are 20, 30, and 39 percent above 1959-63. Smaller increases are projected for 1975 under alternate policies: 27 percent under tariff support policies and 25 percent under EEC entry because of increased competition from imports from EEC countries. There would seem, however, to be no obvious disadvantage in prospect for large-scale U.K. producers compared with producers in EEC countries.

Total output of the poultry sector increased by 57 percent between 1955-57 and 1964-65. Meanwhile, poultry feed consumption increased by about 40 percent, implying an improvement of well over 1 percent annually in feed conversion. Since eggs and poultry meat are joint products, it is difficult to estimate the improvement in feed conversion for either. However, it may have been nearer to 2 percent annually for meat alone. Nevertheless, the improvement is projected at 1 percent annually from the base period.

Poultry meat production increased by 11 percent annually as feed prices fell 4 percent annually from 1955-57 to 1964-65. Production of meat is assumed to be more price sensitive than that of eggs, and a 10-percent drop in the poultry meat-feed price ratio is projected by 1975. This implies a weaker drop in real prices relative to recent trends. Under current policies, production is projected to exceed that of the base period by 48, 71, and 92 percent in 1970, 1975, and 1980. Tariff support policies or EEC entry would result in a slightly larger increase in output by 1975--72 percent or 78 percent--as the resulting higher feed prices would be offset somewhat by the abolition of subsidies on the output of other meats. The projection under EEC entry is dependent upon the assumption that EEC feed prices would be reduced after U.K. entry and upon an improvement in the net trade position for poultry.

FARM OUTPUT AND INCOMES

Gross sales (at real prices) of the agricultural products for which projections were made are projected to increase by 14, 19, and 24 percent, respectively, for 1970, 1975, and 1980 under current policies (table 8). The tariff support or EEC alternative would produce 20- or 23-percent growth by 1975. However, net income per farmer increases more substantially--by 40, 61, and 84 percent under present policies, or by 50 or 68 percent under a tariff support policy or EEC entry by 1975. The considerably smaller income under tariff support may indicate that the levels of support assumed were too low. Because of a less unfavorable trend in costs and a continuing decline in the number of full-time farmers, income per person increases

more rapidly than in other sectors. Trends in costs vary, with the general trend paralleling sales.

The rise in costs of feed and feeder cattle is smaller than the rise in sales under present policies, although under the two alternatives the cost rise would be larger. Fertilizer, machinery, and "other" input costs are projected to rise somewhat faster than sales after 1970 under either alternative. The projected rise in fertilizer cost reflects a sharp increase in usage; it is partially offset by a decline in real prices. Fertilizer usage is expected to double by 1980. Upon entry into the Common Market, the fertilizer subsidy is expected to be removed. More machinery would likely be required in the case of EEC membership, since arable farming would increase; but slightly lower machinery prices would offset this gain in the amount of machinery required. Increases in rent and interest costs are likely to be largely offset by a reduction in total wage payments as agriculture becomes more highly mechanized.

The decline in the number of farmers is placed at 1 percent annually up to 1970 and 1.5 percent afterward. Farmer productivity about doubles by 1975. EEC entry would be expected to produce a more rapid decline in farmer numbers and a shift from vegetables, hogs, and laying hens to crops other than vegetables.

The projected incomes are not inconsistent with the Government obligation via the Agriculture Act of 1957 to maintain a certain monetary value for products included in the annual price reviews (adjusted for cost changes). The cost of government supports is largely determined by the initial assumptions about rates of subsidies. Deficiency payments and livestock production subsidies are projected to continue near the base-period level of £200 million (excluding payments made by the Sugar Board to the British Sugar Corporation). Some decline in other production grants is expected. The main increasing component up to 1970 is support costs of beef-- £60 million by 1970. Afterward, costs for livestock decline while costs for crops are steady. Under tariff support policies, the costs of livestock production subsidies and payments to the British Sugar Corporation and the Wool and Potato Marketing Boards in 1975 would be £50 million, deficiency payments having been dropped. Within the EEC, £50 million would be expected to cover grants for structural improvement and certain production grants the U.K. would retain. These supposed savings under the two alternatives to present policies are only part of the picture. Higher food prices, the revenues from tariffs and levies, and the costs of imports are also important factors under both alternatives.

NET IMPORTS OF FOOD AND RELATED AGRICULTURAL PRODUCTS

Under all three price-policy alternatives, some growth in U.K. imports of food and related agricultural products is projected. This growth is greatest under current policies, the value index at base-period (1959-63) prices rising to 102.8, 105.6, and 108.5 by 1970, 1975, and 1980 (table 9). Under tariff support policies, the index for 1975 rises to 104.0; under the EEC alternative, virtual stagnation occurs as the index reaches only 100.6. However, if entry into the EEC should raise the rate of growth in national income by as much as 1 percent, and if EEC policies should be modified, growth in imports could be back on trend a decade or more after Common Market entry.

The weighted average of real c.i.f. prices for 1975 is projected to decline by 1.3 percent under either present policies or tariff support policies. However, EEC entry would raise prices by 18.7 percent. The major product groupings accounting for this difference are live cattle and meat, dairy products, grain, fruits and vegetables, and fats and oils. For example, import prices of wheat and flour are projected to be stable under present policies or tariff support, but to rise 50 percent with EEC entry. Feedgrain prices are projected to decline by 7 percent under the first two alternatives, but to rise 23 percent under the EEC alternative. These higher prices of feedgrains are reflected in higher prices of livestock product imports via the EEC's variable levies. These higher import prices result in the much lower level of imports projected for the EEC alternative.

The projected increase in imports is mainly in the fruit and vegetable sector, and in lamb, bacon and canned ham, fish, butter, lard, oilcake, fishmeal, coffee, and wine. Entry into the EEC removes lard and butter from this list, but other fats take their place. It is difficult to see any rise in grain imports under any of the alternatives. Although the demand for corn is projected to be up slightly by 1970 in view of specific uses in poultry feed and by industry, still higher supplies of domestic feedgrain could preclude a rise.

A projected foreign exchange savings of £23 million under the tariff support system may seem trivial, especially since it should, in theory, reduce foreign exchange costs more directly than the subsidy system it displaces. However, the tariff support system does not provide as high a level of support as is currently in effect. For equivalent income support, the tariffs would be still higher and the

foreign exchange savings would be enhanced. The extra revenue from a change to the tariff support system is estimated at £92 million (including 41 percent on cereals, 14 percent each on lamb, pork, and dairy products, and 8 percent on canned meat). This would be a sharp departure from the £22 million of total tariff revenue received annually during the base period, when there was a heavy tariff incidence only upon vegetables. On balance, the higher tariffs would pay costs to the Exchequer for production grants and livestock subsidies, and produce a surplus of about £30 million.

Uncertainty as to the extent of the levy and tariff revenues that would be retained by the U.K. treasury makes it difficult to interpret direct government costs of agricultural support with membership in the EEC. Levy revenue might amount to £10 million on beef, £27 million on dairy products, £80 million on cereals, and £9 million on lard (plus the excise duty on imported oil and oilseeds for domestic crushing). Tariff revenues would amount to about £12 million on canned meat and fish, £14 million on lamb, and £15 million on fruit. The above breakdown is based on the assumption that most of the beef and grain imported would be from outside the enlarged EEC and that 100,000 tons of butter and 50,000 tons of cheese would also come from outside. Total levy and tariff revenues would then be about £177 million (including £10 million on existing tariffs), with about £50 million regarded as tariff revenue. Adjusting for price changes for imported goods and the revenue from EEC subsidies on exports of domestic grain (for example, £30 million from 1 million tons of wheat and flour), the foreign exchange cost of joining the EEC is estimated at £123 to £173 million. The latter figure is the more likely since it is difficult to believe that a distinction can be maintained between tariffs and levies and that the £50 million from tariffs could thus be retained by the Exchequer on an indefinite basis. The welfare loss from the new structure of import prices and other sources is estimated at £270 million, of which £159 million is a direct foreign exchange cost. The assumption is also made that any contribution to the EEC's Guidance and Guarantee Fund beyond the £163 million paid from levy and tariff revenue is, in effect, spent inside the country and does not produce a further drain on the Exchequer or the balance of payments. Finally, the Exchequer is left with a reduced balance of expenditure of £161 million in 1975 which might be used in principle to offset some of the loss in welfare to consumers--which may approximate £600 million.

TEXTILE FIBERS AND HIDES AND SKINS

In analyzing past trends and prospects for fibers and hides and skins, consumption must be defined as consumption by British residents or consumption by the industry. Investigation of the relationship between these two forms is limited by a lack of statistics.

For textile fibers, consumption was defined as the disappearance of cloth within the British industry in terms of yarn content or weight. The relationship between the consumption of leather and the production and importation of hides and skins was difficult to establish because of unsatisfactory data. The estimates below must be treated with circumspection, although they do reveal the trends.

Fibers

Initially, attempts were made to relate fiber consumption to income and population growth. But the dominating factor in changes in consumption has been technology and the substitution of other materials. Substitution of manmade fibers has occurred rapidly since World War II, and in 1965 manmade staple fiber comprised 20 percent of the intake of the cotton spinning industry. Also, continuous filament comprised 30 percent of the cotton weaving industry's requirements. Twenty percent of the requirements of the wool spinning industry was manmade fiber.

Substitution of knitted for woven wool has been regarded as a consumer choice, and one which will continue; woven wool fabric consumption is projected to continue to decline by 2 percent annually. The substitution effect is reduced, however, by a positive income elasticity. Substitution of manmade fibers for wool in spinning has been regarded as a producer choice, and is projected to continue at a diminishing rate.

A consistently negative trend in per capita consumption has been the dominant trend for cotton. Therefore, a straight negative trend in consumption of 0.077 kilograms per capita per year is projected.

The relationship between substitution by consumers and that by manufacturers is influenced by foreign trade in unfinished goods. The United Kingdom is now a net importer of cotton textiles (table 10), causing direct consumption by residents to exceed industrial consumption. But it is a net exporter of wool yarn and textiles. For simplicity, the fiber composition of net exports is assumed to be the

same as in products consumed domestically, and the same in textiles as in yarn. As domestic wool production is projected to increase, and both domestic consumption and industrial consumption to decline, import requirements are projected to decline to 321.2, 296.0, and 272.6 million pounds in 1970, 1975, and 1980, respectively, under current policies (table 11). Actual imports in 1959-63 were 452.2 million pounds. Under tariff support policies, 1975 imports would be 299 million pounds, with production 3 million pounds less than 1975 production under current policies. EEC entry, since it would lead to lower U.K. output and increased industrial output for exports, would result in 329.2 million pounds of imports in 1975. Membership in the EEC is expected to affect only the trade in wool textiles, and to be more favorable to exports of cloth than of yarn or tops.

The projected industrial demand for wool is related to projected production to obtain net imports.

Hides and skins

Projections of hides and skins and leather were based on data on consumption of footwear with leather uppers. Although an income elasticity of 0.8 had been calculated for footwear, OECD data indicate that consumption has risen more rapidly than real expenditures. 11/ However, because of the trend toward synthetic materials, this elasticity seems applicable to the future. Net imports were assumed to remain at the 1964 level--4 percent of consumption--as British manufacturers appear to have become more competitive.

Thus, production was projected to rise from 117.9 million pairs of shoes in 1959-63 to 143.6, 157.4, and 173.6 million pairs in 1970, 1975, and 1980. Holding the amount of leather per shoe upper constant results in identical percentage increases in use of leather for shoe uppers: 21.8, 33.5, and 47.2 percent. Use of leather in producing shoe soles and other industrial products is projected to continue to decline--although at a diminishing rate--from 29,960 to 15,000 tons in 1970, 12,000 in 1975, and 10,000 in 1980. 12/ Use of leather for upholstery is projected

11/ Miscellaneous publications of the Organization for Economic Cooperation and Development containing statistics on the U.K. hides and skins industry.

12/ Tonnages are metric (1 M. ton = 2,204.6 lbs.).

to remain at 6,000 tons through 1980. Total utilization of calf and cattle leather (dry weight) would then amount to 59,962 tons in 1970, 60,706 in 1975, and 63,101 in 1980, compared with 67,592 tons in 1959-63.

Based on projected slaughterings, domestic production of leather increases to 102,292 tons in 1970, 106,377 in 1975, and 113,606 in 1980, from 88,160 tons in 1959-63 (table 12). The projected utilization and domestic output result in a decline in net imports of cattle and calf leather to 41,617 tons in 1970, 39,317 in 1975, and 37,836 in 1980, from 62,417 tons in 1959-63.

Under tariff support policies, leather production from cattle and calf skins would be 108,664 tons (wet, salted weight), and utilization would be 157,154 tons, leaving net import requirements of 48,490 tons in 1975. EEC entry would reduce domestic production to 103,298 tons; utilization would be unchanged from that projected under current policies, and net imports would be 42,396 tons.

There appeared to be no clear trend in leather production from sheep and goat skins; therefore, constant utilization was projected. However, domestic production of both sheep and lamb skins is projected to increase. Total production (dry weight) is projected to increase from 2,632 tons in 1959-63 to 2,974, 3,183, and 3,362 tons in 1970, 1975, and 1980, respectively, under present policies. This would result in reduced net imports (also dry weight) of 7,489, 7,280, and 7,101 tons, respectively, compared with 7,831 tons in 1959-63. Under tariff support policies, 1975 output is projected to be 3,075 tons; under EEC entry, it is projected to be only 2,903 tons. Net imports would be 7,388 or 7,560 tons, respectively.

Table 1.--Population and labor force, 1961 and projections for 1970, 1975, and 1980

Item	1961 1/			1970			1975			1980		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
	Thousands											
Population:												
0-14	6,340	6,031	12,371	7,224	6,854	14,078	7,958	7,551	15,509	8,259	7,822	16,081
15-64	16,790	17,416	34,206	17,696	17,752	35,448	17,999	17,822	35,821	18,695	18,299	36,994
65+	2,404	3,835	6,239	2,803	4,371	7,174	3,099	4,691	7,790	3,338	4,952	8,290
Total	25,534	27,282	52,816	27,723	28,977	56,700	29,056	30,064	59,120	30,292	31,073	61,365
Labor force 2/:												
15-64	16,070	8,231	24,301	16,722	8,511	25,233	16,778	8,710	25,488	17,291	8,921	26,212
65+	672	229	901	717	292	1,009	888	343	1,231	1,033	397	1,430
Total	16,742	8,460	25,202	17,439	8,803	26,242	17,666	9,053	26,719	18,324	9,318	27,642

1/ Midyear.
2/ Adjusted for effects of higher marriage rate, increased education, increased occupancy, and accelerated retirement.

Source: Adapted from Government Actuary's forecast in Economic Trends, Central Statistical Office, London, May 1965.

Table 2.--Projected indices of population, labor force, consumer units, and income, 1970, 1975, and 1980

(1961=100)

Item	1970	1975	1980
Population	107.4	111.9	116.2
Labor force 1/	104.6	106.3	109.3
Effective labor input 2/	102.5	101.7	99.8
Consumer units	106.5	110.2	114.3
Gross Domestic Product 3/	128.0	143.6	159.2
Consumer expenditure per consumer unit	120.2	130.3	139.2

1/ Weighted by age and sex.

2/ Weighted according to hours worked and labor units in the labor force; labor productivity estimated to rise 2.5 percent annually.

3/ Equal to consumer's expenditure.

Table 3.--Projected consumption and utilization of agricultural and related products, 1970, 1975, and 1980

Item	Unit 1/	Base period (1959-63)	Present policies			Tariff support	EEC entry
			1970	1975	1980	1975	1975
Beef and veal	1,000 tons	1,183	1,259	1,301	1,364	1,250	1,168
Mutton and lamb	do.	595	655	692	725	659	668
Pork	do.	478	590	645	699	603	618
Bacon	do.	630	691	727	767	705	721
Poultry	do.	329	468	535	597	536	541
Canned meat	do.	153	142	148	155	140	153
Total meat (excl. offals)	do.	3,368	3,805	4,084	4,307	3,893	3,869
Milk	mil. gals.	4,794	5,404	5,741	6,104	5,672	4,841
Eggs	mil. doz.	1,143	1,323	1,414	1,508	1,390	1,389
Margarine	1,000 tons	336	333	335	344	345	448
Lard and compound fat	do.	278	298	312	328	326	329
Other vegetable oils	do.	203	227	243	262	250	256
Total fats and oils (fat content)	do.	816	852	882	921	912	1,008
Fish (filleted wt.)	do.	497	535	560	586	572	566
Grain for food	do.	6,256	6,242	6,262	6,344	6,256	6,302
Pulses	do.	197	196	197	198	200	202
Nuts	do.	84	96	103	110	105	108
Sugar, refined	do.	2,667	2,842	2,947	3,056	2,964	2,853
Potatoes	do.	4,661	4,824	4,942	5,099	4,970	5,056

See footnotes at end of table.

--Continued

Table 3.--Projected consumption and utilization of agricultural and related products, 1970, 1975, and 1980--Continued

Item	Unit 1/	Base period (1959-63)	Present policies			Tariff support	EEC entry
			1970	1975	1980	1975	1975
Tomatoes	1,000 tons	490	527	550	582	549	572
Other vegetables	do.	2,563	2,837	2,996	3,168	3,008	3,032
Total vegetables (excluding potatoes) 2/	do.	3,053	3,364	3,546	3,750	3,557	3,604
Apples and pears	do.	774	900	970	1,035	974	976
Citrus	do.	698	807	852	900	857	823
Bananas	do.	354	398	428	446	433	417
Other fresh fruit	do.	336	398	426	455	427	422
Canned fruit	do.	274	337	367	395	371	352
Dried fruit	do.	150	158	162	167	162	164
Total fruit (fresh equiv.) 3/	do.	2,995	3,404	3,617	3,820	3,636	3,576
Total food 4/	£ mil.	2,475	2,752	2,908	3,074	2,876	2,830
Industrial use of grain	1,000 tons	1,340	1,574	1,797	1,986	1,797	1,797
Feed use of grain	do.	10,683	13,981	14,856	15,767	14,225	13,311
Flowers	£ mil.	41.5	53.6	58.8	64.0	59.0	61.6

1/ Long tons (1 long ton = 2,240 lbs.); imperial gallons (1 imp. gal. = 1.201 U.S. gals.).
2/ Excludes output consumed without entering the marketing system.
3/ Excludes output consumed without entering the marketing system and wine and cider.
4/ Value at farm or import level.

Table 4.--Projected grazing and feed requirements for livestock, 1970, 1975, and 1980

Item	Base period (1959-63)	Present policies			Tariff support 1975	EEC entry 1975
		1970	1975	1980		
			1,000 tons 1/			
Grazing (starch equiv.)	17,185	18,875	19,354	20,010	19,412	18,574
Cattle	11,108	12,389	12,536	12,936	12,822	12,344
Sheep and horses	6,077	6,486	6,818	7,074	6,590	6,230
Total concentrates (starch equivalent)	10,003	12,402	13,122	13,871	12,749	12,131
Cattle	3,480	4,210	4,520	4,915	4,549	4,365
Poultry	3,500	4,120	4,390	4,610	4,340	4,330
Hogs	2,630	3,000	3,220	3,400	2,990	2,950
Sheep and horses	393	422	449	472	459	413
Adjustment for scarcity of grazing, etc.	---	650	543	474	411	73
Total concentrate 2/	15,384	19,074	20,182	21,334	19,607	18,657
Low-protein concentrates	13,076	16,451	17,396	18,384	16,716	15,752
grain	10,683	13,981	14,856	15,767	14,225	13,311
High-protein concentrates	2,308	2,623	2,786	2,950	2,891	2,905
Fish and meat meal, and powdered skim milk	495	605	657	709	639	633
Oilcake	1,787	1,945	2,010	2,066	2,133	2,153

1/ Long tons (1 long ton = 2,240 lbs.).

2/ A factor of 1.538 is applied to requirements as determined in starch equivalent to obtain requirements in terms of concentrate weight.

Table 5.--Projected agricultural land use, 1970, 1975, and 1980

Crop	Base period (1959-63)	Present policies			Tariff support	EEC entry
		1970	1975	1980	1975	1975
			1,000 acres			
Wheat	2,041	2,745	2,878	3,001	283	3,223
Barley	3,619	5,836	6,162	6,348	6,135	6,455
Oats and other grains	1,996	723	507	376	410	501
Total grain	7,656	9,304	9,547	9,725	9,348	10,179
Potatoes	781	698	667	643	673	651
Vegetables (incl. pulses)	451	472	490	513	498	479
Fruit	268	247	241	236	241	240
Sugar beets	430	430	430	430	430	430
Hops and flowers, etc.	52	63	68	71	67	66
Pulses for feed	84	98	109	120	109	109
Root and forage crops	1,061	560	390	345	390	390
Fallow and other	270	135	115	100	115	115
Total crops and fallow	11,053	12,007	12,057	12,183	11,869	12,658
Temporary grass	6,863	6,500	6,500	6,500	6,700	6,100
Permanent grass	12,846	12,075	11,925	11,699	11,913	11,724
Rough grazing	18,196	17,521	17,146	16,771	17,146	17,146
Total grass	37,905	36,096	35,571	34,970	35,759	34,970
Grand total	48,958	48,103	47,628	47,153	47,628	47,628

Table 6.--Projected production of agricultural and related commodities, 1970, 1975, and 1980

Item	Unit 1/	Base period (1959-63)	Present policies			Tariff support	EEC entry
			1970	1975	1980	1975	1975
Beef and veal	1,000 tons	848	963	993	1,052	1,017	967
Mutton and lamb	do.	245	275	295	313	285	269
Pork	do.	467	582	638	694	593	584
Bacon	do.	207	228	246	276	229	227
Poultry	do.	314	466	537	602	541	558
Canned meat	do.	---	---	---	---	---	---
Total meat (excl. offals)	do.	2,081	2,514	2,709	2,937	2,665	2,605
Milk	mil. gal.	2,314	2,755	3,033	3,328	3,011	2,934
Eggs	mil. doz.	1,073	1,292	1,391	1,495	1,363	1,336
Lard and compound fat	1,000 tons	12	24	30	35	30	16
Fish (filleted wt.)	do.	367	362	357	351	363	361
Grain for food	do.	1,502	1,715	1,726	1,739	1,808	1,720
Pulses	do.	31	24	27	30	30	24
Nuts	do.	---	---	---	---	---	---
Sugar, refined	do.	761	877	942	1,006	942	942
Potatoes	do.	4,261	4,352	4,445	4,568	4,470	4,325
Tomatoes	do.	155	145	141	139	141	120
Other vegetables	do.	2,206	2,400	2,521	2,648	2,528	2,468
Total vegetables (excl. potatoes)	do.	2,361	2,545	2,662	2,787	2,669	2,588

See footnote at end of table.

--Continued

Table 6.--Projected production of agricultural and related commodities, 1970, 1975, and 1980--Continued

Item	Unit 1/	Base period (1959-63)	Present policies			Tariff support	EEC entry
			1970	1975	1980	1975	1975
Apples and pears	1,000 tons	514	558	581	600	582	591
Citrus	do.	---	---	---	---	---	---
Bananas	do.	---	---	---	---	---	---
Other fresh fruit	do.	180	187	197	210	197	196
Canned fruit	do.	---	---	---	---	---	---
Dried fruit	do.	---	---	---	---	---	---
Total fruit (fresh equiv.)	do.	694	745	778	810	779	787
Wheat	do.	2,837	4,419	5,007	5,581	4,878	5,607
Barley	do.	4,535	8,317	9,398	10,315	9,358	9,844
Oats	do.	1,966	778	570	443	461	563
Total grain	do.	9,338	13,514	14,975	16,339	14,697	16,014
Grain for food	£ mil.	1,640	2,006	2,170	2,346	2,142	2,133
Flowers	do.	32.3	40.8	43.0	45.0	43.0	41.5

1/ Long tons (1 long ton = 2,240 lbs.); imperial gallons (1 imp. gal. = 1,201 U.S. gals.).

Table 7.--Selected livestock numbers, projections for 1970, 1975, and 1980

Item	Base period (1959-63)		1970	1975	1980
	Observed	Equilibrium			
			Thousands		
Cows:	4,165	4,237			
Dairy	3,239	3,221	3,364	3,484	3,604
Beef	926	1,016	1,079	1,114	1,149
Sheep (over 1 yr.):	15,523	---	16,635	17,050	17,465
Ewes	11,426	12,046	12,556	12,981	13,407
Lambs	13,136	13,845	14,988	15,813	16,658
Sows for breeding	793	835	1,051	1,171	1,291
			Millions		
Laying hens	70.7	67.9	85.9	95.9	105.9

Table 8.--Projected agricultural incomes, 1970, 1975, and 1980

Item	Base period (1959-63)	Present policies			Tariff support	EEC entry
		1970	1975	1980	1975	1975
		Million pounds sterling				
Sales of items projected:						
Base period prices	1,640	2,006	2,170	2,346	2,142	2,133
Current prices	---	1,867	1,951	2,030	1,973	2,019
Less:						
Cost of livestock feed and net cattle inflow	493	547	560	577	622	630
Adjusted sales	1,147	1,320	1,391	1,453	1,351	1,389
Cost of inputs:						
Fertilizer	72	90	97	101	97	112
Machinery	217	225	230	235	230	230
Other	150	177	207	237	207	207
Sales net of inputs	708	828	857	880	817	840
Wages	304	272	258	238	258	250
Rent and interest	108	133	143	153	138	153
Net income	296	423	456	489	421	437
Production subsidies	38	30	27	24	27	50
Other adjustments 1/	53	53	53	53	53	53
Official net income	387	506	536	566	501	540
		Pounds sterling				
Net income/farmer	1,056	1,479	1,696	1,938	1,585	1,770
Net income/holding 2/	1,267	1,775	2,035	2,326	1,902	2,124

1/ Adjusted for initial value of livestock production subsidies, livestock increase, and balance of other items; assumed fixed.

2/ Full-time holding equivalent.

Table 9.--Projected net imports of agricultural and related products, 1970, 1975, and 1980

Item 1/	Unit 2/	Base period (1959-63)	Present policies			Tariff support	EEC entry
			1970	1975	1980	1975	1975
Beef and veal	1,000 tons	335	296	308	312	233	201
Mutton and lamb	do.	350	380	397	412	374	399
Bacon and canned ham	do.	423	463	481	491	476	494
Other canned meat	do.	153	142	148	155	140	153
Total meat 1/	do.	1,261	1,281	1,334	1,370	1,223	1,247
Fish	do.	130	173	203	235	209	205
Milk	mil. gals.	2,480	2,649	2,708	2,776	2,661	1,907
Butter	1,000 tons	409	439	450	466	443	307
Vegetable oils	do.	294	250	261	273	274	362
Lard	do.	192	237	240	240	248	203
Tallow	do.	75	100	90	80	90	90
Other fats and oils	do.	177	188	191	193	198	242
Cocoa beans (crushed)	do.	83	86	91	96	91	91
Other oilseed (crushed)	do.	996	923	907	892	907	961
Oilcake	do.	1,161	1,345	1,420	1,486	1,543	1,528
Fish and meat meal	do.	252	286	309	321	271	315
Sugar	do.	1,906	1,965	2,005	2,050	2,022	1,911
Wheat	do.	4,542	4,180	4,115	4,093	4,068	2,948
Corn	do.	3,432	3,666	3,402	3,255	3,222	2,705
Other grain products (grain equiv.)	do.	967	437	423	410	293	-257
Total grain (equiv.)	do.	8,941	8,283	7,940	7,758	7,583	5,396
Grain offals & molasses (for feed)	do.	876	850	850	850	800	750

See footnotes at end of table.

--Continued

Table 9.--Projected net imports of agricultural and related products, 1970, 1975, and 1980--Continued

Item 1/	Unit 2/	Base period (1959-63)	Present policies			Tariff support 1975	EEC entry 1975
			1970	1975	1980		
Pulses for food	1,000 tons	166	172	169	168	170	178
Nuts and oilseed for food	do.	86	96	103	110	105	108
Potatoes	do.	400	472	497	532	500	731
Tomatoes	do.	335	382	409	443	409	452
Other vegetables	do.	357	437	474	520	480	564
Apples and pears	do.	260	342	389	436	392	385
Citrus and products	do.	698	807	852	900	857	823
Bananas	do.	354	398	428	446	433	417
Canned fruit	do.	274	337	367	395	371	352
Dried fruit	do.	150	158	162	167	162	164
Other fruit	do.	156	211	229	245	230	226
Tea	do.	227	229	234	240	234	234
Coffee	do.	55	98	110	121	110	110
Tobacco	mil. lbs.	295	313	322	334	322	322
Wine	mil. gals.	22	34	40	46	40	46
Spirits	mil. proof gals.	-27	-45	-54	-63	-54	-54
Total c.i.f. value (base period prices)	£ mil.	1,453	1,494	1,534	1,576	1,511	1,462

1/ Excludes certain products for which projections were made. These products and their projected net imports, in the order presented above (1959-63 imports in parentheses), are: pork (11,000 tons), 8,000, 7,000, 5,000, 10,000, and 34,000 tons; poultry (15,000 tons), 2,000, -2,000, -5,000, -5,000, and -17,000 tons; eggs (70 mil. doz.), 31, 23, 13, 27, and 53 mil. doz.; and flowers (by value, £9.2 mil.), £13.6 mil., £15.9 mil., £19.0 mil., £16.0 mil., and £20.6 mil.

2/ Long tons (1 long ton = 2,240 lbs.); imperial gallons (1 imp. gal = 1.201 U.S. gals.).

Table 10.--Projected utilization of cotton, 1970, 1975, and 1980

Item	Base period (1959-63)	1970	1975	1980
		1,000 metric tons		
Cotton:				
Total industrial consumption	249.6	245.4	239.2	231.1
Cotton yarn:				
Production	256.2	251.6	245.1	236.5
Net imports	6.8	6.5	6.5	6.5
Apparent consumption	262.9	258.1	251.6	243.0
Consumption in cotton goods excluding cotton fabrics 1/	113.0	113.0	113.0	113.0
Cotton fabric:				
Production	183.7	178.9	172.4	163.0
Net imports	66.8	59.6	57.5	54.6
Apparent consumption	250.5	238.5	229.9	218.4
Total apparent consumption	363.5	351.5	342.9	331.4
		Kilograms		
Consumption per capita	6.8	6.2	5.8	5.4

1/ Includes estimated imports of readymade articles.

Table 11.--Projected production, utilization, and trade of wool, 1970, 1975, and 1980

Item	Base period (1959-63)	1970	1975	1980	Tariff support 1975	EEC entry 1975
			Million pounds			
Production	83	89	93	97	90	85
Exports	39	39	39	39	39	39
Domestic supply	44	50	54	58	51	46
Utilization by industry	473.8	371.2	350.0	330.6	350.0	375.2
Domestic utilization	334.9	272.3	261.1	251.3	261.1	261.1
Import requirements	1/452.2	321.2	296.0	272.6	299.0	329.2

1/ Actual imports.

Table 12.--Projected production, utilization, and trade of hides and skins, 1970, 1975, and 1980

Item	Unit	Base period (1959-63)	1970	1975	1980	Tariff support 1975	EEC entry 1975
Production:							
Cattle skins 1/	Thou.	3,186	3,723	3,865	4,134	3,961	3,749
Calfskins 1/	do.	797	740	822	828	738	831
Leather (wet, salted wt.) 2/	M. tons	88,160	102,292	106,377	113,606	108,664	103,298
Utilization of cattle and calf leather	do.	162,221	143,909	145,694	151,442	157,154	145,694
Net import requirements	do.	3/62,417	41,617	39,317	37,836	48,490	42,396
Production:							
Sheep skins 1/	Thou.	1,094	1,263	1,330	1,381	1,285	1,213
Lamb skins 1/	do.	2,135	2,401	2,579	2,735	2,492	2,352
Leather (dry weight) 4/	M. tons	2,632	2,974	3,183	3,362	3,075	2,903
Utilization	do.	10,463	10,463	10,463	10,463	10,463	10,463
Net import requirements	do.	7,831	7,489	7,280	7,101	7,388	7,560

1/ The number of hides and skins produced is assumed identical to the number of animals slaughtered.
2/ Cattle and calf skins are assumed to average 26.8 and 3.4 kilograms, respectively.
3/ Actual imports.
4/ Sheep and lamb skins are assumed to average 0.454 and 0.189 kilograms, respectively.

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